

B82442-H

#### **SIMID 2220-H**



High-current version Size 2220 (EIA) or 5650 (IEC) Rated inductance 1 to 10000 μH Rated current 35 to 2500 mA

#### Construction

- Upright ferrite drum core
- Laser-welded winding
- Flame-retardant encapsulation

#### **Features**

- Very high current handling capability
- High L values
- Suitable for reflow (IR and vapor phase) and wave soldering

#### **Applications**

- Filtering of supply voltages, coupling, decoupling
- DC/DC converters
- Automotive electronics
- Telecommunications

#### **Terminals**

- Tinned
- 0,4 μm Cu; 1–2 μm Ag; 5–7 μm Sn
- Base material CuSn6
- No leaching during wave soldering

#### Marking

Marking on component:

Manufacturer,

L value (in nH) and tolerance of L value (coded),

date of manufacture (coded)

Minimum data on reel:

Manufacturer, part number, ordering code,

L value and tolerance of L value,

quantity, date of packing

#### **Delivery mode**

12-mm blister tape, wound on 330-mm Ø reel

For details on taping, packing and packing units see page 153





#### **SMT Inductors, SIMID Series** B82442-H **SIMID 2220-H**

#### SMD

#### General technical data

Rated inductance $L_{R}$	Measured with impedance analyzer HP 4194A at frequency $f_{\rm L}$
Q factor Q <sub>min</sub>	Measured with impedance analyzer HP 4194A at frequency f <sub>Q</sub>
Rated current I <sub>R</sub>	Maximum permissible dc with inductance decrease $\Delta L/L_0 \le 10$ % and temperature increase of $\le 40$ K at rated temperature of 85°C
Self-resonance frequency f <sub>res, min</sub>	Measured with network analyzer HP 8753
DC resistance R <sub>max</sub>	Measured at 20°C ambient temperature, measuring current < I <sub>R</sub>
Climatic category	In accordance with IEC 60068-1 55/125/56 (– 55°C/+ 125°C/56 days damp heat test)
Solderability	In accordance with IEC 60062-2-58 (215 $\pm$ 3) °C, (3 $\pm$ 0,3) s Wetting of soldering area: $\geq$ 90 %
Resistance to soldering heat	In accordance with IEC 60068-2-20 260 °C, 10 s $\Delta L/L \leq \pm 3$ %
Permissible PCB bending	2 mm (100 mm long standard PCB)
Weight	Approx. 400 mg

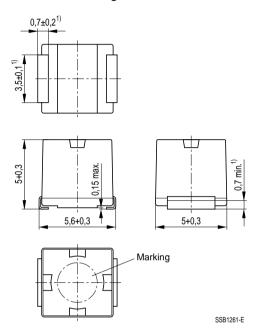


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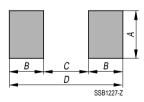
#### **SIMID 2220-H**



#### **Dimensional drawing**



#### Layout recommendation



Dimensions (mm)	Α	В	С	D
Wave/reflow soldering	4,5	2,0	4,0	8,0

<sup>1)</sup> Soldering area, tinned





#### **SIMID 2220-H**

#### SMD

#### Characteristics and ordering codes

						1	
L <sub>R</sub> μΗ	Toler- ance	$Q_{min}$	f <sub>L</sub> ; f <sub>Q</sub> MHz	I <sub>R</sub> mA	$R_{max} \ \Omega$	f <sub>res, min</sub> MHz	Ordering code <sup>1)</sup>
1,0	± 10 %	10	7,96	2500	0,024	95	B82442-H1102-K
1,2	≙ K	10	7,96	2350	0,028	70	B82442-H1122-K
1,5		10	7,96	2200	0,032	55	B82442-H1152-K
1,8		10	7,96	2000	0,040	47	B82442-H1182-K
2,2		10	7,96	1800	0,048	42	B82442-H1222-K
2,7		10	7,96	1700	0,056	37	B82442-H1272-K
3,3		10	7,96	1550	0,064	34	B82442-H1332-K
3,9		10	7,96	1450	0,072	32	B82442-H1392-K
4,7		10	7,96	1350	0,088	29	B82442-H1472-K
5,6		10	7,96	1250	0,104	26	B82442-H1562-K
6,8		10	7,96	1130	0,120	24	B82442-H1682-K
8,2		10	7,96	1050	0,144	22	B82442-H1822-K
10		10	2,52	1000	0,168	19	B82442-H1103-K
12		10	2,52	880	0,20	17	B82442-H1123-K
15		10	2,52	810	0,24	16	B82442-H1153-K
18		10	2,52	740	0,29	14	B82442-H1183-K
22		10	2,52	670	0,35	13	B82442-H1223-K
27		10	2,52	620	0,42	11,5	B82442-H1273-K
33	±5%	10	2,52	560	0,50	10,5	B82442-H1333-+
39	≙ J	10	2,52	520	0,58	9,5	B82442-H1393-+
47	± 10 %	10	2,52	480	0,68	8,5	B82442-H1473-+
56	≙K	10	2,52	430	0,80	7,8	B82442-H1563-+
68		10	2,52	400	0,96	7,0	B82442-H1683-+
82		10	2,52	380	1,12	6,4	B82442-H1823-+
100		20	0,796	350	1,28	6,0	B82442-H1104-+
120		20	0,796	320	1,52	5,4	B82442-H1124-+
150		20	0,796	290	1,76	4,8	B82442-H1154-+
180		20	0,796	270	2,24	4,4	B82442-H1184-+
220		20	0,796	240	2,72	3,9	B82442-H1224-+
270		20	0,796	220	3,36	3,6	B82442-H1274-+

<sup>1)</sup> Replace the + by the code letter for the required inductance tolerance (see table).



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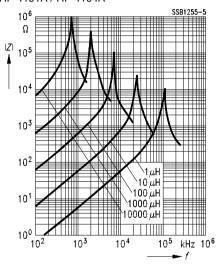
#### Characteristics and ordering codes (continued)

L <sub>R</sub> μΗ	Toler- ance	Q <sub>min</sub>	f <sub>L</sub> ; f <sub>Q</sub> MHz	I <sub>R</sub> mA	$R_{max} \ \Omega$	f <sub>res, min</sub> MHz	Ordering code <sup>1)</sup>
330	±5%	20	0,796	200	3,92	3,2	B82442-H1334-+
390	≙ J	20	0,796	180	4,64	2,9	B82442-H1394-+
470	± 10 %	20	0,796	170	5,60	2,6	B82442-H1474-+
560	≙K	20	0,796	150	6,80	2,4	B82442-H1564-+
680		20	0,796	140	8,00	2,2	B82442-H1684-+
820		20	0,796	130	10,4	2,0	B82442-H1824-+
1000		30	0,252	120	12,0	1,8	B82442-H1105-+
1200		30	0,252	105	13,6	1,5	B82442-H1125-+
1500		30	0,252	100	16,0	1,4	B82442-H1155-+
1800		30	0,252	85	24,0	1,3	B82442-H1185-+
2200		30	0,252	75	28,0	1,2	B82442-H1225-+
2700		30	0,252	65	44,0	1,1	B82442-H1275-+
3300		30	0,252	55	48,0	1,0	B82442-H1335-+
3900		30	0,252	53	56,0	1,0	B82442-H1395-+
4700		30	0,252	50	62,4	0,9	B82442-H1475-+
5600		30	0,252	46	68,0	0,8	B82442-H1565-+
6800		30	0,252	42	88,0	0,7	B82442-H1685-+
8200		30	0,252	39	100	0,6	B82442-H1825-+
10000		30	0,0796	35	120	0,5	B82442-H1106-+

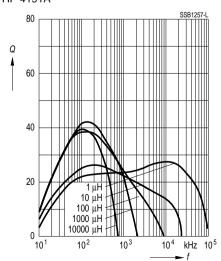
<sup>1)</sup> Replace the + by the code letter for the required inductance tolerance (see table).

#### **SIMID 2220-H**

Impedance |Z| versus frequency f measured with impedance analyzer HP 4191A / HP 4194A

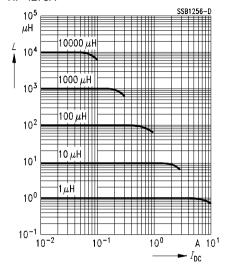


Q factor versus frequency f measured with impedance analyzer HP 4191A

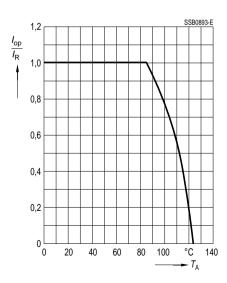


#### SMD

Inductance L versus dc load current  $I_{DC}$ measured with LCR meter HP 4275A



Current derating I<sub>op</sub>/I<sub>R</sub> versus ambient temperature  $T_A$ 





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